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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/695,152	10/24/2000	Kunihiko Noguchi	450100-02779	3303

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EXAMINER

NGUYEN, FRANCIS N

ART UNIT PAPER NUMBER

2674

DATE MAILED: 11/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/695,152

Applicant(s)

NOGUCHI, KUNIHICO

Examiner

FRANCIS NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Claim Objections

1. Claim 9 is objected to because of the following informalities: incorrect phrase “ said control means” (claim 9, line 3, page 30) instead of “ said control device”. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stove et al. (US Patent 6,331,848) in view of Urade et al. (US Patent 6,272,644).

As to **claim 1**, Stove et al. discloses a projection display system (see Abstract) connected to a control device as a host through a serial interface (**presentation computer 1 coupled to projector 3 via line 2 as shown in figure 1**, column 3, lines 53-55), in which data is transmitted/received bidirectionally to display a picture on a display screen, said apparatus comprising:

display means (**screen 4** as shown in figure 1) for being fed from said control device (**presentation computer 16** as shown in figure 1) with display data and for being illuminated with projected light to display a picture represented by said display data;

display control means for controlling a picture demonstrated by said display means based on display control signal input (pointing device **laser pointer 8** as shown in figure 1, column 6, lines 47-50).

However, Stove et al. fails to expressly teach input/output means connected to the control device adapted for generating display control signals controlling said display means and to at least one external peripheral equipment to input/output data based on the supplementary information appended to input data. Urade et al. teaches input/output means connected to the control device adapted for generating display control signals controlling said display means (**USB hub 31 linked to display 30 via microcontroller 38** as shown in figure 7). Urade et al. teaches USB hub connected to a host computer and a plural of peripheral devices (column 4, lines 57-61, also figure 7), **bidirectional data transfer between hub controller and microcontroller** (column 5, lines 29-32). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of Stove et al., then couple the USB hub 31 as taught by Urade et al. to presentation computer 16 in apparatus of Stove to obtain the combined apparatus Stove et al. modified by Urade et al. because it would result in expanding connectivity to a plurality of devices, bi-directional data communication, and also flexible power control of USB devices as taught by Urade et al. (column 4, lines 36-47).

As to **claim 2**, see the same citation for claim 1. The projection display apparatus of claim 1 wherein said input/output means is a hub conforming to the USB (Universal Serial Bus) standard (apparatus Stove et al. modified by Urade et al. **comprises USB Hub 31** shown in

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Urade et al. figure 7) and is connected to the control device having an interface conforming to the USB standard (**note Urade et al. teaches USB hub 11 connected to host computer , column 4, lines 57-61) which is presentation computer 16 of Stove et al. via USB interface 37 as taught in figure 7 of Urade et al.**, and to an external peripheral equipment having an interface conforming to the USB standard (see Urade et al., column 1, lines 15-17, **printer, keyboard , also see Urade et al. column 1, lines 30-34 , devices include USB interface and a USB logical device).**

As to **claim 3**, the projection display apparatus according to claim 1, wherein an operating input device (**Urade et al. teaches keyboard**, column 1, lines 14-15) for generating an operating input signal as an external peripheral equipment is connected to said input/output means (**Urade et al. already teaches a keyboard connected to USB hub , see column 1, lines 30-34, also USB Hub 31 provides a plurality of USB device ports 32-35 shown in figure 7)** and wherein said display control means controls a picture demonstrated on said display means (**laser pointer 8 shown in figure 1 of Stove et al.**) in accordance with a pointer control signal (**Stove et al. teaches four buttons 8 of laser pointer 8 for pointer control signals**, column 6, lines 47-50) from the control device (**figure 1 of Stove et al. teaches presentation computer 1 and interactive computer 7 which specifies which pattern to display, column 5, lines 6-8)** based on the operating input signal generated in said operating device (**note Urade et al. aforementioned teaching of USB keyboard).**

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As to **claim 4**, see the same citation for **claim 1**. The projection display apparatus according to claim 1 wherein a display device is connected as an external peripheral device (see Urade et al. **teaching of monitor may be connected through USB controller, column 1, lines 15-18, also teaching USB monitor** , column 1, lines 48-49) to said input /output means, and wherein said input/output means outputs displays data and display control signals to said display device (Urade et al. figure 7 teaches **connection of USB Hub 31 to display 30 via link of microcontroller 38 and display control circuitry 40**).

As to **claim 5**, Stove et al. teaches a projection display system (see Abstract) in which a control device as a host and a projection display apparatus as a target controlled by said control device are interconnected over a serial interface (**presentation computer 1 connected to projector 3 via line 2 shown in figure 1**), and in which data transmission/reception is made bi-directionally at least between said control device and said projection display apparatus to demonstrate a picture by said projection display apparatus on a display (**screen 4 shown in figure 1**), wherein

said projection display apparatus includes display means (**screen 4 as shown in figure 1**) for being fed from said control device with display data and for being illuminated with projected light to display a picture represented by said display data, and display control means for controlling a picture (**pointing device laser pointer 8 as shown in figure 1**) demonstrated by said display means based on a display control signal input, and wherein said control device includes input/output means connected to the projection display apparatus and control means for outputting display control signals and display data to the projection display apparatus and to said

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external peripheral equipment connected to said projection display apparatus to cause the projection display apparatus to demonstrate a picture on the projection display . However Stove et al. fails to teach input/output means connected to the control device adapted for generating display control signals controlling said display means and to at least one external peripheral equipment to input/output data based on the supplementary information appended to input data.

Urade et al. teaches input/output means connected to the control device adapted for generating display control signals controlling said display means (**USB hub 31 linked to display 30 via microcontroller 38** as shown in figure 7, **also note display control circuitry 40 controlling display 30**). Urade et al. teaches USB hub connected to a host computer and a plural of peripheral devices (column 4, lines 57-61, also figure 7) , **bidirectional data transfer between hub controller and microcontroller (column 5, lines 29-32)**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the apparatus of Stove et al., then couple the USB hub 31 as taught by Urade et al. to presentation computer 16 in apparatus of Stove to obtain the combined apparatus Stove et al. modified by Urade et al. because it would result in expanding connectivity to a plurality of devices, **bi-directional data communication, and also flexible power control of USB devices as taught by Urade et al. (column 5, lines 30-33, column 4, lines 36-47)**.

As to **claim 6**, see the same citation for claim 5. The projection display a system according to claim 5 wherein the input/output means of the projection display apparatus is a hub pursuant to the USB (Universal Serial Bus) and is connected to an external peripheral equipment having an interface conforming to the USB standard (**Urade et al. teaches devices including printers,**

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keyboards (column 1, lines 14-15) as devices having USB interface in communication with hub repeater, column 1, lines 30-34) and wherein the input/output means of the control device is an interface pursuant to the USB standard (apparatus Stove et al. modified by Urade et al. teaches microcontroller 38 connected to USB hub 31 via microcontroller interface 37, see Urade et al. figure 7).

As to **claim 7**, the projection display system according to claim 5 wherein there is provided an operating input device (**Urade et al. teaches keyboard**, column 1, lines 14-15) connected as an external peripheral device to said input/output means of ~~the~~ said projection apparatus to generate an operating input signal , and wherein said display control means controls a picture demonstrated on said display means (laser pointer 8 shown in figure 1 of Stove et al.) in accordance with a pointer control signal (Stove et al. **teaches four buttons 8 of laser pointer 8 for pointer control signals**, column 6, lines 47-50) from said control device (figure 1 of Stove et al. **teaches presentation computer 1 and interactive computer 7 which specifies which pattern to display, column 5, lines 6-8)** which is based on the operating input signal generated in said operating input device (**note Urade et al. aforementioned teaching of USB keyboard**).

As to **claim 8**, see the same citation for claim 5. The projection display system according to claim 5 wherein there is provided a display device connected as an external peripheral device to said input/output means (Urade et al. teaching **devices including monitors (column 1, lines 14-15) as devices having USB interface in communication with hub repeater, column 1, lines 30-34)** of said projection display apparatus and wherein the input/output means of said

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projection display apparatus (see figure 7 of Urade et al. hub 31) outputs display data and the display control signal from the control device to said display device (see figure 7 of Urade et al. teaching **microcontroller 38 coupling to display control circuitry 40 for driving display 30**).

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stove et al. in view of Urade et al. and further in view of Nguyen et al. (US Patent 5,682,181).

As to **claim 9**, Stove et al. modified by Urade et al. fails to teach control means switching the application program generating the display based on the operating input signal. Nguyen et al. teaches a control means switching the application program generating the display based on the operating input signal : method and display control system for a projection display system, see abstract, teaching main menu window 60 with different selections, switching from main menu window 60 to draw window 80 (column 5, line 40 through column 6, line5) based on user selection. **It would have been obvious to a person of ordinary skill in the art the time of the invention to utilize the apparatus Stove et al. modified by Urade et al., then modify the presentation software taught by Stove et al. to include menu selection of applications as taught by Nguyen et al., to obtain the combined apparatus Stove et al. modified by Urade et al and Nguyen et al., because it would provide user greater flexibility to select appropriate software application by menu selection.**

This corresponds to the projection display system according to claim 7 wherein said control device includes operating input means adapted for being actuated to generate said operating input signal (**Note Stove et al. teaching aforementioned laser pointer 8 as operating input**

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means), said control means switching the application program (**Nguyen et al. aforementioned teaching of main menu window/draw window**) generating the display based on the operating input signal from said operating input means or the operator input device connected to the projection display apparatus.

Conclusion

5. The prior art made of record is not relied upon, but pertinent to Applicant's disclosure:

US Patent 6,105,143 Kim

US Patent 6,333,750 Odryna et al.

Reference Kim is made of record as it discloses a USB hub connected to a variety of peripheral devices.

Reference Odryna et al. is made of record as it discloses an input/output means as a multi-sourced video distribution hub

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **FRANCIS N NGUYEN** whose telephone number is **703 308-8858**. The examiner can normally be reached during hours 8:00 AM- 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached at 703 305-4579.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service whose telephone number is (703) 306-0377.

A handwritten signature in black ink, appearing to read 'Francis N. Nguyen', written in a cursive style.

FRANCIS N NGUYEN
Examiner
Art Unit 2674

FN
November 14th, 2002